

**Listing of Claims:**

- 1.(Previously Presented)      A method of graphically representing clickstream data of a shopping session on a network comprising:
- extracting one or more shopping sessions from one or more Web server logs of one or more Web server systems of one or more online stores;
- deriving one or more micro-conversions from the one or more shopping sessions, the micro-conversion comprising a shopper's conversion from one shopping step to another; and
- graphically representing clickstream data from one or more micro-conversions in a first visualization, the first visualization comprising at least three axes representing shopping steps and one or more lines that each correspond to at least one said shopping session, at least one of the one or more lines intersecting less than all of the axes and terminating at the axis wherein the at least one said shopping session ends.
- 2.( Cancelled)
- 3.(Previously Presented)      A method, as in claim 1, where the shopping steps include a product impression that is a view of a hyperlink to a Web page presenting one of a product and service, a clickthrough that is a click on the hyperlink and view of the Web page, a basket placement that is a placement of the one of the product and service in a shopping basket, and a purchase that is a purchase of the one of the product and service.
- 4.(Previously Presented)      A method, as in claim 1, where the clickstream data is a collection of micro-conversions of one or more shoppers for at least one of products and services sold in at least one online store.
- 5.(Previously Presented)      A method, as in claim 1, where the first visualization comprises a parallel coordinate system and one or more extension components including one or more parallel axes of sequential events, one or more dependent variable values of timestamps, one or more filters, one or more categorizers, and one or more hyperlink associations.
- 6.(Previously Presented)      A method, as in claim 5, where the parallel coordinate system comprises a series of parallel lines that are placed equidistantly, each parallel line

representing a specific dependent variable and dependent variable values being plotted along a respective axis, and an independent variable that is represented by polygonal lines connecting the corresponding dependent variable values.

7.(Previously Presented) A method, as in claim 5, where the parallel axes of sequential events is an assignment of a series of sequential events to parallel lines in a parallel coordinate system.

8.(Previously Presented) A method, as in claim 7, where the sequential events include at least one of the following: one or more steps of shopping in one or more stores, one or more product development steps, and one or more service development steps.

9.(Previously Presented) A method, as in claim 5, where the dependent variable values of timestamps is an assignment of timestamp values as data points to a series of sequential events that are assigned to the equal number of parallel axes in a parallel coordinate system.

10.( Cancelled)

11.(Previously Presented) A method, as in claim 5, where the filter is a means to select one or more groups of polygonal lines viewed in the parallel coordinate system.

12.(Previously Presented) A method, as in claim 5, where the categorizer is a parallel axis in the parallel coordinate system for categorizing polygonal lines in the system.

13.(Previously Presented) A method, as in claim 12, where the categorizer includes at least one of the following: referrer Web sites of sessions, internet service providers of sessions, lengths of sessions, methods used to find product information by session, methods used to find service information by sessions, products viewed, services viewed, items placed in a shopping cart, items purchased by sessions, time points of sessions, geographic regions where sessions originate, age, sex, education, and income of session originators, sales history of owners of sessions, and Web page patterns accessed by one of sessions and owners of sessions.

14.(Previously Presented) A method, as in claim 5, where the hyperlink association is association of at least one hyperlink with the line representing a session, and the line comprises a hyperlink to a Web page that provides additional information of the session.

15.(Previously Presented) A method, as in claim 1, wherein at least the first visualization represents, via dropouts of one or more lines, where the online store loses customers.

16.(Previously Presented) A method, as in claim 22, wherein the at least one alternate visualization comprises a filter for selecting at least one group of sessions.

17.(Previously Presented) A method, as in claim 22, wherein the at least one alternate visualization comprises sessions of different shoppers categorized by one or more values of a categorizer axis, as compared to the first visualization.

18.(Previously Presented) A method, as in claim 1, further comprising displaying additional information of one or more sessions on at least one Web page by using at least one hyperlink association

19.(Previously Presented) A method, as in claim 22, further comprising displaying a stored visualization representing a first time and a stored visualization representing a second time.

20.(Previously Presented) A method, as in claim 22, further comprising modifying at least one of Web design, navigation paths of the online store, advertisement banners, product layouts, service layouts, marketing and merchandising based on at least one of the visualizations.

21. (Cancelled)

22.(Previously Presented) The method of claim 1 further comprising:  
graphically representing one or more variations of the clickstream data in at least one alternate visualization in response to a request;

storing at least one of the first and the alternate visualizations in at least one computer memory;

retrieving at least one of the first and the alternate visualizations from the at least one computer memory; and

graphically comparing at least two of the first and the alternate visualizations retrieved from the at least one computer memory.

23.(Previously Presented) A method of doing business on a network comprising:

receiving over a network data relating to a virtual path that one or more potential customers followed through one or more online stores; and

as part of a business transaction, providing a user with means to visualize the virtual path, wherein the means to visualize comprises a graphical representation of the virtual path as a line that intersects axes representing steps along the virtual path, the line terminating prior to intersecting all of the axes.

24.(Previously Presented) The method of claim 23 wherein the line terminates at a point that the one or more potential customers exited the one or more online stores prior to making a purchase.

25.(Previously Presented) The method of claim 23 further including:

receiving over the network data relating to a second virtual path that one or more other customers followed through one or more online stores; wherein the means to visualize further comprises a graphical representation of the second virtual path as a second line that intersects all of the axes.

26.(Previously Presented) The method of claim 23 wherein the graphical representation further comprises a hyperlink associated with the line that links to a Web page for displaying additional information of the virtual path.

27.(Previously Presented) The method of claim 23 further comprising providing the user with one or more filters by which to dynamically change the graphical representation.

28.(Previously Presented) The method of claim 27 wherein the filter dynamically changes the graphical representation based on at least one of the following aspects of the virtual path: heirarchical browsing, keyword search, parametric search, and recommendations.

29.(Previously Presented) The method of claim 23 wherein the graphical representation is provided to the user over a network.

30.(Previously Presented) A system that operates to provide a service to a user, the service comprising providing a graphical display of clickstream data received over a network, the clickstream data representing a virtual path that one or more third parties followed through the internet, the graphical display comprising axes that represent points along the virtual path and a line that represents the virtual path that is plotted against the axes but that crosses less than all of the axes.

31.(Previously Presented) The system of claim 30 wherein one of the axes represents product purchase and the line terminates prior to crossing the product purchase axis.

32.(Previously Presented) The system of claim 30 wherein the clickstream data further represents a second virtual path that a separate one or more third parties followed through the internet, and wherein the means to visualize further comprises a graphical representation of the second virtual path as a second line plotted against the axes.

33.(Previously Presented) The system of claim 30 wherein the graphical display further comprises a hyperlink associated with the line that links to a Web page for displaying additional information of the virtual path.

34.(Previously Presented) The system of claim 30 wherein the service further comprises providing one or more filters that may be used to dynamically change the graphical display.

35.(Previously Presented) The system of claim 34 wherein the filter dynamically changes the graphical display based on at least one of the following aspects of the virtual path: heirarchical browsing, keyword search, parametric search, and recommendations.

Appl. No. 09/653,888  
Notice of Appeal dated September 22, 2004  
Reply to final Office Action dated July 14, 2004

36.(Previously Presented) The system of claim 30 wherein the graphical display is provided to the user over a network.

END OF CLAIMS